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United States Patent [19]

Odagiri et al.

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[54] **WRIST WATCH TYPE GPS RECEIVER**

[57] **ABSTRACT**

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[51] Int. Cl.⁶ **G01S 5/02**

[52] U.S. Cl. **342/357; 701/213**

[58] Field of Search **342/357, 352; 701/213**

[56] **References Cited**

U.S. PATENT DOCUMENTS

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The system includes an antenna posture detecting device for detecting an antenna posture condition where it is apparently impossible to receive the wave, and a received signal operation controlling device for temporarily interrupting the wave receiving operation, in the case where it is impossible for the antenna to receive the wave, until the wave receiving operation is again possible. The system may include a body movement detecting device for detecting an action of the user; an action judgement device for judging the action of the user on the basis of an output signal of the body movement detecting device; a signal receiving operation controlling device for controlling a signal receiving operation of the GPS receiving device from the judgement result of the action judgement device; a moving distance calculating device for calculating a moving distance of the user on the basis of an output signal of the body movement detecting device during a period of time when the GPS signal receiving operation is interrupted; and an alarm device for receiving a wave of a GPS receiving antenna on the basis of an output signal of the moving distance calculating device and for giving an alarm to the user for a position where it is easy for the GPS receiving antenna to receive the wave.

17 Claims, 10 Drawing Sheets

